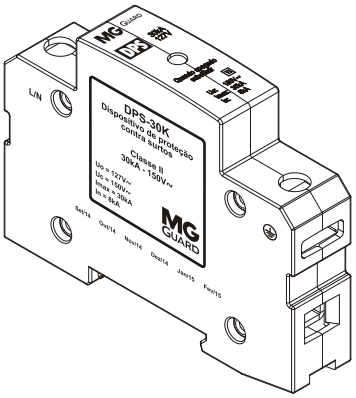


SPD - SURGE PROTECTION DEVICES

Devices used to prevent damage to electronic equipment due to electric surges caused by lightning or switching of circuits.

protection

REFERENCES

Product code	Class	Uo Rated voltage	Uc Max continuos operation voltage	In Rated current	Imáx Maximum current	Up Protection level
DPS-12K1	II	127V~	175 VAC / 200 VDC	5 KA	12 KA	1,5 KV
DPS-20K1	II	127V~	150 VAC / 200 VDC	5 KA	20 KA	1,0 KV
DPS-30K1	II	127V~	150 VAC / 200 VDC	8 KA	30 KA	1,2 KV
DPS-45K1	II	127V~	150 VAC / 200 VDC	15 KA	45 KA	1,4 KV
DPS-60K1	II	127V~	150 VAC / 200 VDC	20 KA	60 KA	1,5 KV
DPS-12K2	II	220V~	275 VAC / 350 VDC	5 KA	12 KA	1,5 KV
DPS-20K2	II	220V~	275 VAC / 350 VDC	5 KA	20 KA	1,2 KV
DPS-30K2	II	220V~	275 VAC / 350 VDC	8 KA	30 KA	1,4 KV
DPS-45K2	II	220V~	275 VAC / 350 VDC	15 KA	45 KA	1,5 KV
DPS-60K2	II	220V~	275 VAC / 350 VDC	20 KA	60 KA	1,5 KV

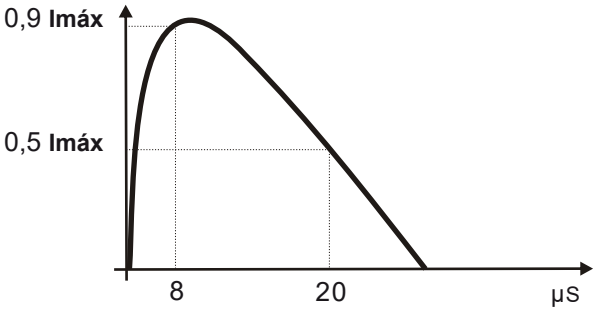
Class: Classification according to withstand the tests performed. The class II SPD are subjected to current pulse testing 8/20 µS, and used to divert surge currents caused by indirect lighting strikes.

Uo (Rate voltage): Rated voltage between phase and neutral.

Uc (Maximum operating voltage): Maximum effective voltage (RMS) or DC, which can be continuously applied to the SPD.

In (Rated Current) and Imax (Maximum Current): A SPD can lead between 10 and 20 times the nominal current (In) and one or two times the maximum current (Imax).

Up (Protection level): Maximum pulse voltage reached at the terminals of a SPD before it operates. The level of SPD protection should be compatible with the supportability of equipment, so, the tension that the DPS allows spending must be equal to or less than the supportability of the protected equipment, which, according to the Brazilian Standard NBR 5410, in single-phase systems must be of 1,5kV at least.



Test curve for class II SPD (8/20µS).

GENERAL FEATURES

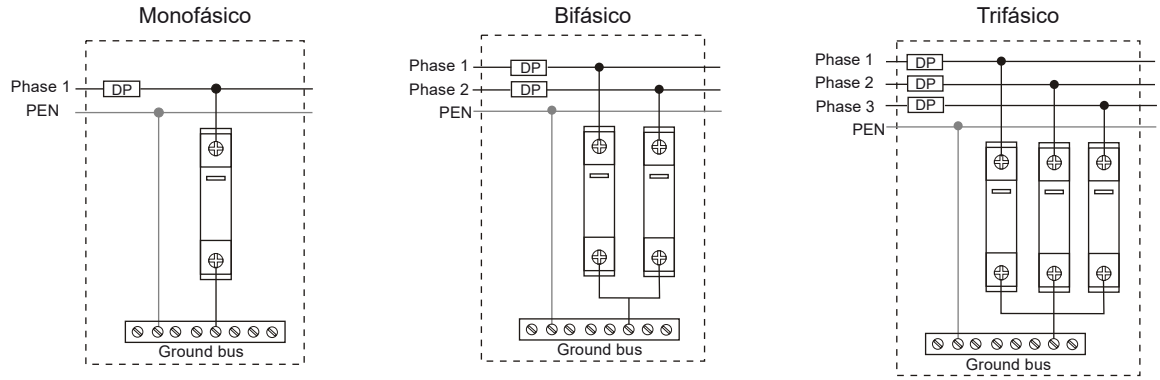
- Housing material: polyamide with fiberglass.
- Technology: Metal-oxide varistor (MOV).
- Switching time: <25ns.
- Terminal capacity: 4 to 25mm².
- Mouting: DIN rail (35mm).
- Thermal fuse for protection in case of overload.
- Operation indicator:
  - In operation (LED on): indicates that the SPD is in working.
  - Deadly (LED off): the device has fulfilled its function, protecting the connected equipment to the mains. In this case, the SPD should be replaced.

MG® MARGIRIUS

WIRING DIAGRAM

Installation at the entrance of the power line or the main switchboard, as Brazilian Standard NBR 5410 - Electrical installations of low voltage.

Power grids with earthed neutral (TN-C or TN-C-S)

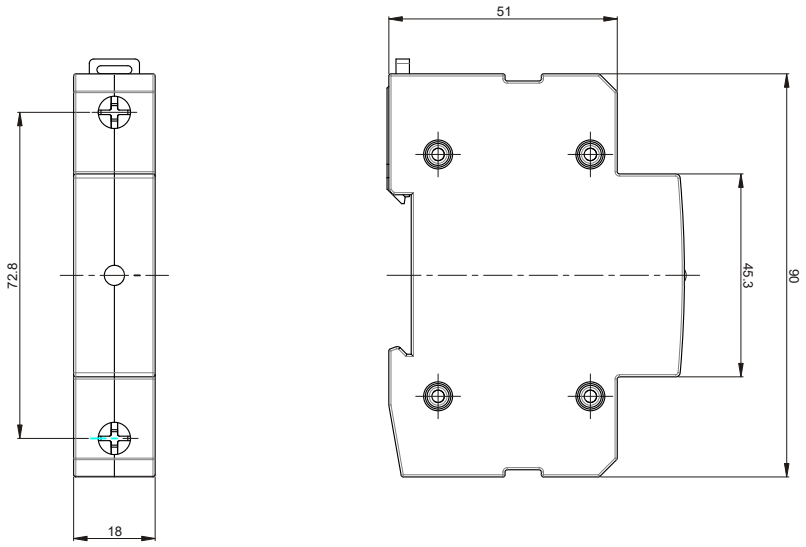


PEN: Conductor combining the neutral and protection functions.
DP: Overcurrent protection device. In case it may be a circuit breaker or fuse.
If the main circuit breaker is larger than 100A, use as a protective device (PD) circuit breakers dedicated C curve 25A (for SPD to 45KA) and 50A (for 60KA SPD) in each of the phases.

Guidelines:

The SPD MarGirius are given only for installation between phase and earth as wiring diagrams above.
In power grids with ungrounded neutral, it is necessary to install a SPD between neutral and ground. In these situations, where a SPD MarGirius is used, it will not show the signs “In operation” and “Deadly” and should be replaced ever-than any of the other SPD are “Deadly”.
For details, refer to brazilian Standard NBR-5410, or the Technical Department.

DIMENSIONS (mm)



SELECTION GUIDE

DPS - ❑❑❑ ❑

Imáx	Uo
12K	**1 (127V~)**
20K	**2 (220V~)**
30K	
45K	
60K	